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EXAMINER

LIN, WEN TAI

ART UNIT

PAPER NUMBER

2154

DATE MAILED: 05/07/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/556,069

Applicant(s)

ALLAVARPU ET AL.

Examiner

Wen-Tai Lin

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 January 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-34 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 April 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. Claims 1-34 are presented for examination.
2. The information disclosure statement filed 1/30/2002 fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each U.S. and foreign patent; each publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. It has been placed in the application file, but the information referred to therein has not been considered.
3. Claims 1, 8, 12-13, 20, 24 and 33-34 are objected to because of the following issues/informalities:
 - (A) As to claims 8, 20 and 34, it appears that the phrase "the generic primitive data type" lack antecedent basis.
 - (B) As to claims 12-13, 20 and 33, it is not clearly understood what does it mean by "single mapping". Note that no proper definition of this term is found in the specification. For purpose of prior art rejections in this office action, the term "single mapping" is being construed as "a mapping".Clarification/Correction is required in response to this office action.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1, 10-11, 25, 28-29 and 31 are rejected under 35 U.S.C. 102(e) as being anticipated by Carre[U.S. Pat. No. 6282579].

6. As to claims 1 and 10, Carre taught the invention as claimed including: a method for mapping managed object metadata [i.e., address type is part of the metadata of a managed object], the method comprising:

- inputting a first data type [i.e., address type is a data type] from a first set of data types, wherein the first set of data types is expressed in an abstract syntax notation, and wherein the abstract syntax notation comprises a language for describing data [Abstract; col.1, lines 34-43, wherein ASN.1 is an abstract syntax notation];
- determining a corresponding second address type from a second set of data types wherein the second set of address types is expressed in an interface

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definition language, wherein the interface definition language comprises a language for implementing interfaces to managed objects, wherein the interface definition language is operable across a plurality of platforms and across a plurality of programming languages, and wherein the interface definition language is class independent [col.1, lines 44-56]; and returning the second address type [Abstract: lines 7-10; col.4, lines 1-6].

7. As to claim 11, Carre further taught that the abstract syntax notation comprises Guidelines for Managed Objects (GDMO) [col.5, lines 4-9].

8. As to claims 25, 28-29 and 31, since the features of these claims can also be found in claims 1, they are rejected for the same reasons set forth in the rejection of claims 1 above.

9. Claims 13, 22, 24 and 33 are rejected under 35 U.S.C. 102(e) as being anticipated by Goldberg et al.[U.S. Pat. No. 6496833].

10. As to claims 13, 22 and 24, Goldberg taught the invention as claimed including: a method for mapping managed object metadata, the method comprising:

- inputting a first data type from a first set of data types types [e.g., 1420, Fig.14; col.10, line 63 - col.11, line 6; col.19, lines 34-44 ; i.e., as part of the query string, the first data type is entered via the GUI], wherein the first set of

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- data types is expressed in an interface definition language, wherein the interface definition language comprises a language for implementing interfaces to managed objects, wherein the interface definition language is operable across a plurality of platforms and across a plurality of programming languages, and wherein the interface definition language is operable to provide a single mapping which is applicable to any managed object class [625, Fig.6; i.e., the IDL under CORBA is an interface definition language applicable to any managed object class];
- determining a corresponding second data type from a second set of data types, wherein the second set of data types is expressed in an abstract syntax notation, and wherein the abstract syntax notation comprises a language for describing data [col.11, lines 49-52]; and
 - returning the second data type [308, Fig.3; 706, Fig.7; i.e., the second data type is outputted from the results processor].

11. As to claim 33, since the features of this claim can also be found in claims 13, it is rejected for the same reasons set forth in the rejection of claims 13 above.

Claim Rejections - 35 USC § 103

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. Claims 2-6, 12 and 26-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Carre [U.S. Pat. No. 6282579], as applied to claims 1, 10-11, 25, 28-29 and 31 above, further in view of AAPA [Applicant admitted prior art].

14. As to claims 2-6 and 12, Carre did not specifically generalize the mapping of metadata to include:

- a telephone system;
- a network switch;
- type information about an attribute of one of the managed objects; and
- type information about a notification of one of the managed objects.

However, Carre taught that objects specified in different specification languages such as CORBA IDL and ASN.1 may result in incompatible data types. Thus, in order for objects specified in ASN.1 to communicate across a CORBA/IDL infrastructure, mapping between these incompatible metadata is required [col.4, line 52- col.5, line 3]. Furthermore, AAPA taught that information such as telephone system, network switch (or device), attributes and events (such as notification) constitute the metadata of a managed object [see, e.g., Specification: page 2, lines 1-16 and page 4, lines 5-10].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to include Carre's data type mapping procedure to the

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aforementioned metadata because the mappings of these data types would further allow the CORBA and OSI entities (i.e., the managed objects specified in OSI's abstract syntax notation) to dynamically interact over a CORBA infrastructure.

15. As to claims 26-27, since the features of these claims can also be found in claims 1-2 and 25, they are rejected for the same reasons set forth in the rejection of claims 1-2 and 25 above.

16. Claims 7-9, 30 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Carre [U.S. Pat. No. 6282579], as applied to claims 1-6, 10-12, 25-29 and 31 above, further in view of Adusumilli [U.S. Pat. No. 5870749].

17. As to claims 7-9, Carre and AAPA did not specifically teach mappings between the following:

- a primitive data type and a generic primitive data type;
- an object data type and a sequence of the generic primitive data type; and
- an object data type and a choice structure comprising a selector, value fields and various data types.

wherein the latter being a data type in an interface definition language and the former being a data type in the abstract syntax notation.

However, Adusumilli taught that data types in the CMIP using ASN.1 can be translated to/from custom designed data structure [Abstract: lines 1-7], wherein primitive

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data type and object data type are used in the abstract syntax notation and the generic primitive data type, sequence of the generic primitive data type, and choice structure comprising a selector, value fields and various data types are used in the interface definition language (such as C), respectively [Figs. 4-6; Fig.26; col.11, line 1 - col.12, line 29; col.17, lines 14-25].

It would have been obvious to one of ordinary skill in the art to have been incorporated the above structure related mappings into Carre and AAPA's method/system, because by doing so it would make it possible to use the very popular languages such as C and C++ for specifying a managed object in Carre and AAPA's system and resolving the incompatibility issues that exist between different specification languages.

18. As to claim 30, Adusumilli taught that in determining the corresponding second data type from the second set of data types, the program instructions are executable to look up the second data type in one or more lookup tables [col.2, lines 46-58; col.3, lines 18-23].

19. As to claim 32, since the features of this claim can also be found in claims 1, 8 and 31, it is rejected for the same reasons set forth in the rejection of claims 1, 8 and 31 above.

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20. Claims 14-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Goldberg et al. (hereafter "Goldberg") [U.S. Pat. No. 6496833], as applied to claims 13, 22, 24 and 33 above, and further in view of AAPA [Applicant admitted prior art], as applied to claims 2-6, 12 and 26-27 above.

21. As to claims 14-18, Goldberg did not specifically generalize the mapping of metadata to include:

- a telephone system;
- a network switch;
- type information about an attribute of one of the managed objects; and
- type information about a notification of one of the managed objects.

However, AAPA taught that information such as telephone system, network switch (or device), attributes and events (such as notification) constitute the metadata of a managed object [see, e.g., Specification: page 2, lines 1-16 and page 4, lines 5-10].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to include Goldberg's data type mapping procedure to the aforementioned metadata because the mappings of these data types would further allow the CORBA and OSI entities (i.e., the managed objects specified in OSI's abstract syntax notation) to dynamically interact over a CORBA infrastructure.

22. Claims 19-21, 23 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Goldberg et al. (hereafter "Goldberg") [U.S. Pat. No. 6496833], as

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applied to claims 13-18, 22, 24 and 33 above, and further in view of Adusumilli [U.S. Pat. No. 5870749], as applied to claims 7-9, 30 and 32 above.

23. As to claims 19-21, Goldberg and AAPA did not specifically teach mappings between the following:

- a generic primitive data type and a primitive data type;
- a sequence of the generic primitive data type and an object data type; and
- a choice structure comprising a selector, value fields and various data types and an object data type,

wherein the former being a data type in an interface definition language and the latter being a data type in the abstract syntax notation.

However, Adusumilli taught that data types in the CMIP using ASN.1 can be translated to/from custom designed data structure [Abstract: lines 1-7], wherein primitive data type and object data type are used in the abstract syntax notation and the generic primitive data type, sequence of the generic primitive data type, and choice structure comprising a selector, value fields and various data types are used in the interface definition language (such as C), respectively [Figs. 4-6; Fig.26; col.11, line 1 - col.12, line 29; col.17, lines 14-25].

It would have been obvious to one of ordinary skill in the art to have been incorporated the above structure related mappings into Carre and AAPA's method/system, because by doing so it would make it possible to use the very popular languages such as C and C++ for specifying a managed object in Carre and AAPA's

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system and resolving the incompatibility issues that exist between different specification languages.

24. As to claim 23, Adusumilli further taught that the abstract syntax notation comprises Guidelines for Managed Objects (GDMO) [Fig.2b; col.6, lines 1-13].

25. As to claim 34, since the features of this claim can also be found in claims 13, 20 and 33, it is rejected for the same reasons set forth in the rejection of claims 13, 20 and 33 above.

26. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

Holloway et al.	[U.S. Pat. No. 6176883];
Suzuki et al.	[U.S. Pat. No. 6085240];
Finni	[U.S. Pat. No. 5941978]; and
Rigori et al.	[U.S. Pat. No. 5892950].

27. A shortened statutory period for response to this action is set to expire 3 (three) months and 0 days from the mail date of this letter. Failure to respond within the period for response will result in ABANDONMENT of the application (see 35 U.S.C. 133, M.P.E.P. 710.02, 710.02(b)).

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wen-Tai Lin whose telephone number is (703)305-4875. The examiner can normally be reached on Monday-Friday(8:00-5:00) .

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on (703)305-9678. The fax phone numbers for the organization where this application or proceeding is assigned are as follows:

(703)746-7239 for official communications;

(703)746-7238 for after final communications; and

(703)746-5516 for status inquires draft communication.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)305-3900.

Wen-Tai Lin

April 30, 2003

Wen-Tai Lin
4/30/03